

IN THE CLAIMS

This listing of the claims replaces all prior versions of the claims in the application.

1-33. (canceled)

34. (previously presented): A nucleic acid molecule which encodes a fusion protein comprising the amino acid sequence of SEQ ID NO:7 or a sequence having at least about 90% sequence identity thereto, wherein said protein comprises a native HCV epitope and is capable of eliciting an immunological response against HCV.

35-41. (canceled)

42. (previously presented): A vector comprising a nucleic acid molecule which encodes a fusion protein comprising the amino acid sequence of SEQ ID NO:7 or a sequence having at least about 90% sequence identity thereto, wherein said protein comprises a native HCV epitope and is capable of eliciting an immunological response against HCV.

43. (canceled)

44. (canceled)

45. (currently amended): ~~The A vector of claim 42~~ comprising the nucleotide sequence of SEQ ID NO:6, or a nucleotide sequence having at least about 90% sequence identity to the sequence of SEQ ID NO:6, wherein said vector is capable of expressing a fusion protein that comprises a native HCV epitope and elicits an immunological response against HCV.

46-65. (canceled)

66. (previously presented): An immunogenic composition comprising a nucleic acid molecule which encodes a fusion protein comprising the amino acid sequence of SEQ ID NO:7 or a sequence having at least about 90% sequence identity thereto, wherein said protein comprises a native HCV epitope and is capable of eliciting an immunological response against HCV.

67. (canceled)

68. (canceled)

69. (currently amended): ~~The~~ An immunogenic composition ~~of claim 66,~~ wherein said comprising a nucleic acid molecule ~~comprises~~ comprising the nucleotide sequence displayed in SEQ ID NO:6, or a nucleotide sequence having at least about 90% sequence identity to the sequence of SEQ ID NO:6, wherein said nucleic acid molecule is capable of expressing a fusion protein that comprises a native HCV epitope and elicits an immunological response against HCV.

70-76. (canceled)

77. (previously presented): A cell line that expresses a virus-like particle comprising a first HBsAg and a chimeric antigen, wherein the chimeric antigen comprises the amino acid sequence of SEQ ID NO:7 or a sequence having at least about 90% sequence identity thereto, and wherein the first and the second HBsAg each comprise a substantially complete S domain, wherein said antigen comprises a native HCV epitope and is capable of eliciting an immunological response against HCV.

78-79. (canceled)

80. (withdrawn): A method of producing the cell line of claim 77, the method comprising:

transfecting a cell with a vector that expresses a virus-like particle comprising a first HBsAg and a chimeric antigen, wherein the chimeric antigen comprises the amino acid sequence of SEQ ID NO:7 or an amino acid sequence having at least about 90% sequence identity thereto, and wherein the first and the second HBsAg each comprise a substantially complete S domain and said antigen comprises a native HCV epitope and is capable of eliciting an immunological response against HCV; and

culturing the cell to produce a cell line that expresses the virus-like particles.

81. (withdrawn): The method of claim 80, wherein the vector is a plasmid vector.

82. (withdrawn): The method of claim 81, wherein the plasmid vector is pCMV-II-E2661-sAg (SEQ ID NO:6).

83. (withdrawn): A method of producing a virus-like particle comprising the steps of:

culturing a cell of the cell line of claim 77 in a culture medium and
isolating the virus-like particle from the culture medium.

84. (withdrawn): The method of claim 83, wherein the cell is a CHO cell or a COS cell.

85. (previously presented): A vector comprising a nucleic acid sequence which encodes a first HBsAg and a nucleic acid sequence which encodes a fusion protein comprising the amino acid sequence of SEQ ID NO:7 or a sequence having at least about 90% sequence identity thereto, wherein the first and the second HBsAg each comprise a substantially complete S domain, wherein said protein comprises a native HCV epitope and is capable of eliciting an immunological response against HCV.

86. (previously presented): The vector of claim 85, wherein an internal ribosomal entry site (IRES) precedes the nucleic acid sequence encoding the fusion protein.

87. (canceled)

88. (currently amended): The A vector of claim 85 comprising a nucleic acid sequence which encodes a first HBsAg and a nucleic acid sequence comprising the nucleotide sequence of SEQ ID NO:6, or a nucleotide sequence having at least about 90% sequence identity to the sequence of SEQ ID NO:6, wherein the first and the second HBsAg each comprise a substantially complete S domain, wherein said vector is capable of expressing a fusion protein that comprises a native HCV epitope and elicits an immunological response against HCV.

89. (previously presented): The nucleic acid molecule of claim 34 encoding a fusion protein comprising the amino acid sequence of SEQ ID NO:7.

90. (previously presented): The vector of claim 42, wherein the nucleic acid molecule encodes a fusion protein comprising the amino acid sequence of SEQ ID NO:7.

91. (previously presented): The immunogenic composition of claim 66, wherein the nucleic acid molecule encodes a fusion protein comprising the amino acid sequence of SEQ ID NO:7.

92. (new): A cell line that expresses a virus-like particle comprising a first HBsAg and a chimeric antigen, wherein the chimeric antigen is encoded by a vector comprising the nucleotide sequence of SEQ ID NO:6 or a sequence having at least about 90% sequence identity thereto, and wherein the first and the second HBsAg each comprise a substantially complete S domain, wherein said antigen comprises a native HCV epitope and is capable of eliciting an immunological response against HCV.